

REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on February 22, 2010. By virtue of this amendment, no claims are amended. Claims 1- 26 and 31-34 are pending in this application and listed above for the Examiner's convenience, with claims 1, 11, 21, 24, 31, and 33 being independent.

Claims 1-6, 8, 10, 21, 23, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli (US Patent No. 6,980,520) in view of Bordogna et al. (US Patent Publication No.: 2004/0085904, hereafter, Bordogna). Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in view of Bordogna and further in view of Kim et al. (US Patent Publication No. 2003/0219027). Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in view of Bordogna and further in view of Montalvo et al. (US Patent Publication No. 2003/0147385). Claims 11-20, 24, 26, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli in view of Bordogna and further in view of Levine (US Patent No. 6,504,818). Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli (US Patent No. 6,980,520) in view of Bordogna and further in view of Leach, JR. et al (US Patent Publication No. 2002/0089994).

In response, Applicant respectfully disagrees, because the Final Office Action mischaracterizes Applicant's claim language and consequently Bordogna does not disclose the claim elements alleged in the final office action, and further because, even if Bordogna or another reference provided the alleged disclosure, it would not have been obvious to modify Erimli to obtain Applicant's invention, because no proper line of reasoning supporting such a modification may be provided, because Erimli teaches away from any such modification, and, further, any such modification would have changed the principle of operation of Erimli.

For example, claim 1 recites:

A method of managing flow of datagram traffic, the method comprising:

receiving datagrams from a first port of a first device at a first port of a second device using a pathway that is operably connected to a second port of the first device and a second port of the second device;

determining an individual port on the first device that is causing oversubscription of the first port of the second device;

transmitting a pause frame from the second device to the first device, the pause frame causing the individual port to pause transmission of the datagrams using the pathway, independently of a source address of the datagrams; and

receiving datagrams from a third port of the first device at the first port of the second device using the pathway, while the individual port on the first device is paused.

The Final Office Action alleges at page 5 that Bordogna discloses, “...transmitting the pause frame independently of a source address of the datagrams (Paragraph [0025] discloses a congestion condition can be detected by a receiving end station 170-n, and a port-based pause frame can be sent from the LAN 160 to the GFP mapping function 155).”

Applicant disagrees, and specifically, asserts that the above-reproduced statements of the Final Office Action mischaracterize Applicant’s claim language. As reproduced above, claim 1 recites that the pause frame causes the individual port “...to pause transmission of the datagrams using the pathway, independently of the source address of the datagrams.” In other words, claim 1 recites that the pausing of the datagram transmission of the individual port is independent of the source address of the datagrams transmitted by the individual port, not that the transmission of the pause frame is independent of the source address (which may or may not be true with respect to implementations of claim 1), as alleged in the Final Office Action.

Therefore, Applicant submits that Bordogna does not disclose such source address-independent pausing and that the Final Office Action, in mischaracterizing the language of claim 1, fails even to allege that Bordogna discloses the elements of claim 1 which are admittedly not disclosed by Erimli. Additionally, Applicant disagrees that Bordogna discloses any “port-based pause frame” which is relevant to claim 1 and/or which provides the teachings alleged by the Final Office Action.

In the latter regard, Bordogna discloses, with reference to FIG. 1, that a network setting may include a transport network 150 which connects LAN 110 and LAN 160, which may include end station 105-1...105-N and 170-1...170-N, respectively. Bordogna discloses that prior art systems teach suspension or reduction of arrival rates of data packets so as to avoid a buffer overflow condition (see, e.g., Bordogna, paragraph [0003]). Specifically, Bordogna describes that the prior art includes “...a port-based flow control arrangement ... based on a flow control message, such as a ‘pause’ frame” (see, e.g., Bordogna, paragraph [0004]). Further,

Bordogna discloses that in the prior art, a “...port-based pause function (in which) a pause frame (is) broadcast to all transmitting stations (so that a) need exists for a method for suspending the flow of only a single station that transmits packets over an aggregated transport link” (see, e.g., Bordogna, paragraph [0007]). Specifically, Bordogna discloses that in FIG. 1, a “port-based pause frame” is sent across network 150 to each transmitting station 105-1...105-N, thus causing all such transmitting station to suspend transmission of frames, even though only the buffer associated with one receiving station has a potential overflow condition. See, e.g. Bordogna, paragraph [0015]. Bordogna discloses that the port-based pause frame is sent only to the offending transmitting end station 105-n, as identified by a customer identifier 310. See, e.g., Bordogna, paragraph [0018]. Bordogna goes on to disclose that, to address this need, a “port-based pause frame” *is sent to a specific end station 105-n, so that the transmitting end station 105-n that caused the congestion condition is informed of the congestion condition.* See, e.g., Bordogna, paragraph [0024].

Thus, Bordogna discloses that the prior art systems broadcast a “port-based pause frame” to all transmitting stations sharing an aggregated transport link, and then discloses that in the systems of Bordogna themselves, a “port-based pause frame” is instead sent to the specific end station that caused the congestion, where such an end station is identified by a customer identifier.

Consequently, it is apparent that Bordogna does not disclose pausing of a selected, individual port of a specific device, as recited in claim 1. Further, to the extent that Bordogna discloses pausing of frames, such pausing is disclosed as occurring with respect to an individual end station 105-n identified by a customer identifier. In other words, Bordogna discloses pausing of frames based on a source of the frames.

Based on the above, Applicant submits that Bordogna does not disclose pausing transmitted datagrams of an individual port independently of a source address of the datagrams, as recited in claim 1. Therefore, as referenced above, the Final Office Action mischaracterizes Applicant’s claim language and consequently Bordogna does not disclose the claim elements alleged in the final office action. Further, even if Bordogna or another reference provided the alleged disclosure, it would not have been obvious to modify Erimli to obtain Applicant’s invention, because no proper line of reasoning supporting such a modification may be provided,

because Erimli teaches away from any such modification, and, further, any such modification would have changed the principle of operation of Erimli.

Specifically, Erimli discloses, as discussed in Applicant's previous responses, "Source-Based Flow Control Across Multiple Devices ...The present invention is directed to a source-based flow control mechanism in a network device, such as multiport switch 180. The present invention modifies a conventional MAC control pause frame to include a source address field relating to the source of the congestion. The multiport switch 180 ... identifies a source address associated with a congestion condition and transmits a MAC control pause frame including the identified source address. A second switch receives the MAC control pause frame and suspends transmission to multiport switch 180 of data frames having the source address included in the pause frame. The second switch may also identify the port associated with the source address included in the pause frame. The second switch may then transmit a similar MAC control pause frame on the port associated with the source address." Erimli further discloses, "(t)he multiport switch 180A may then transmit the MAC control pause frame 600 (including source address field 610)...(t)he multiport switch 180B may also perform an address lookup operation to identify the port associated with the source address in source address field 610" (of the MAC control pause frame).

Thus, it is apparent that the entirety of Erimli is directed to source-based flow control that relies on the identification. In contrast, claim 1 recites causing the individual port to pause transmission of the datagrams using the pathway, independently of a source address of the datagrams. For example, Applicant's description discloses that an individual port may be paused selectively, based on a threshold value (for datagram traffic) stored and associated with the individual port. Although such a pausing operation may be executed while taking a source address of datagrams into account, the operation of selectively pausing the port in question is clearly disclosed as being executed based on a volume of data traffic, independent of source address(es) of the individual datagrams.

Applicant respectfully submits that because the entirety of Erimli is directed to "source-based flow control" as referenced above, no reasonable interpretation of Erimli may be made in which Erimli discloses or renders obvious the selective pausing of an individual port, independent of a source address(es) of datagrams transmitted thereover, as recited in claim 1.

Specifically, modifying Erimli to make the pausing of transmitted datagrams independent of source addresses thereof would change the principle of operation of Erimli. However, the MPEP states at MPEP 2143.01(VI) that “if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)”

Further, and similarly, Applicant submits that in any obviousness rejection, Erimli must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), as required by MPEP 2141.02(VI). Erimli clearly discloses source address-based pausing of frames, which leads away on its face from Applicant’s claim of pausing which is independent of source address(es).

In conclusion, the Final Office Action admits that Erimli does not disclose “the pause frame causing the individual port to pause transmission of the datagrams using the pathway, independently of a source address of the datagrams,” as recited in claim 1. The Office Action ostensibly relies on Bordogna for this disclosure, but Bordogna does not provide a disclosure of pausing which is independent of source address(es), and, to the contrary, teaches that pausing occurs with respect to individual end stations identified by customer identifier(s). Moreover, even if Bordogna or another reference were cited which provided the missing element(s) of Erimli, Applicant submits that Erimly would not have been properly modified to include such missing elements, because Erimli teaches away from such a modification and such a modification would have changed a principle of operation of Erimli (i.e., the principle that pausing should be source-based).

Therefore, independent claim 1, as well as dependent claims 2-10, are allowable for at least these reasons. Independent claims 11, 21, 24, 31, and 33 recite the same or similar features, and are thus allowable for at least the same reasons, along with their respective dependent claims. For example, independent claim 11 recites, “signaling the first port of the first device to continue sending datagrams to the first port of the second device at a reduced rate, independently of a source address of the datagrams.” As described above, Erimli discloses source-based control of transmitted frames which are transmitted through a plurality of ports, while Bordogna

discloses pausing frames from an end station 105-n. Consequently, even if Levine is said to disclose a reduction in transmission rate of such transmitted frame as alleged by the Final Office Action, Applicant submits that no proper modification of Erimli based on Bordogna may be said to render obvious “signaling the first port of the first device to continue sending datagrams to the first port of the second device at a reduced rate, independently of a source address of the datagrams,” as recited in claim 11.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intended to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment. In particular, Applicant traverses any purported response to Applicant’s previously-presented arguments from any preceding response. Applicant preserves the right to assert and appeal such previously-presented arguments as may be appropriate during prosecution of the present application.

Applicant believes that all the application is condition for examination on the merits and respectfully requests such examination. The Examiner may telephone Applicant’s attorney (202- 470-6452) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,

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